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AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A packet processing device for processing packets in which variable length data is split and stored, the packet processing device comprising:

a header analyzing section for analyzing a header of an inputted packet and determining whether data stored in a payload is start data containing start information or other data;

a data extracting section for referring to an analysis result from the header analyzing section[[,]] and extracting the data from the payload of the packet;

a buffer for storing the data extracted by the data extracting section;

a buffer controlling section for controlling a stored position and an accumulated data amount of the data in the buffer;

a start data identifying section for generating stored position information representing a position of the start data stored in the buffer and a count number representing a number of the start data stored in the buffer, as information for identifying the start data in the buffer, based on the analysis result from the header analyzing section and the control by the buffer controlling section; and

a decode section for reading out data from the buffer with a predetermined timing, ~~and for performing a decode process for the data read out based on the information for identifying the start data in the buffer, the information having been generated by the start data identifying section~~ obtaining the stored position information and the count number from the start data identifying section, separating the start data contained in the data read out into start information and data based on the stored position information and the count number, and performing a decode process for the data read out based on the start information;

wherein the buffer controlling section compares the count number against a predetermined threshold number and, when the number becomes equal to or greater than the threshold number, outputs a predetermined notification signal, and

wherein the decode section reads out the data from the buffer with a timing of receiving the notification signal.

2. **(Currently Amended)** The packet processing device according to claim 1,

wherein the start data identifying section comprises:

a start position memory for retaining the stored position information representing the position of the start data stored in the buffer; and

a number-of-starts counter for counting [[a]] the number of the start data stored in the buffer.

3. **(Original)** The packet processing device according to claim 2,

wherein the start position memory is a register for retaining the stored position information.

4. **(Original)** The packet processing device according to claim 2,

wherein the start position memory is a memory, constructed independently of the buffer, for retaining the stored position information.

5. **(Original)** The packet processing device according to claim 2,

wherein the stored position information is a write address in the buffer storing the start data.

6. **(Original)** The packet processing device according to claim 2, wherein the stored position information is information representing a position of the start data relative to first data stored in the buffer.

7-9. **(Canceled)**

10. **(Currently Amended)** The packet processing device according to claim [[7]] 2, wherein the threshold number is a number of areas in the start position memory which enables retention of the stored position information.

11-13. **(Canceled)**

14. **(Original)** The packet processing device according to claim 1, wherein, when a transport stream packet under MPEG technique that stores variable-length PES data is inputted, the header analyzing section analyzes a header of a TS packet in the inputted transport stream, and determines whether data stored in a payload is start PES data containing a PES header or other PES data,

the data extracting section refers to an analysis result from the header analyzing section, and extracts PES data from the payload of the TS packet,

the buffer stores the PES data extracted by the data extracting section,  
the buffer controlling section controls a stored position and an accumulated data amount of the PES data in the buffer, and  
the start data identifying section generates information for identifying the start PES data in the buffer, based on the analysis result from the header analyzing section and the control by the buffer controlling section.

15. (Currently Amended) A packet processing method for processing packets in which variable length data is split and stored, the packet processing method comprising:

an analysis step of analyzing a header of an inputted packet, and ~~determines~~ determining whether data stored in a payload is start data containing start information or other data;

an extracting step of referring to an analysis result from the ~~analyzing~~ analysis step, and extracting the data from the payload of the packet;

a step of storing the data extracted in the extracting step to a buffer;

a control step of controlling a stored position and an accumulated data amount of the data in the buffer;

an identifying step of generating stored position information representing a position of the start data stored in the buffer and a count number representing a number of the start data stored in the buffer, as information for identifying the start data in the buffer, based on the analysis result from the ~~analyzing~~ analysis step and the control from the control step;

a step of comparing the count number against a predetermined threshold number and, when the number becomes equal to or greater than the threshold number, outputting a

predetermined notification signal:

a reading step of reading out data from the buffer with a predetermined timing of receiving the notification signal;

a separating step of separating, based on the information for identifying the start data stored position information and the count number, the start data contained in the data read out into start information and data; and

a decoding step of performing a decode process for the data read out based on the start information.

16-18. (Canceled)

19. (Currently Amended) A computer readable medium having recorded thereon a computer readable program for causing a computer to execute a packet processing method for processing packets in which variable length data is split and stored, the packet processing method comprising:

an analysis step of analyzing a header of an inputted packet, and determining whether data stored in a payload is start data containing start information or other data;

an extracting step of referring to an analysis result from the analyzing analysis step, and extracting the data from the payload of the packet;

a step of storing the data extracted in the extracting step to a buffer;

a control step of controlling a stored position and an accumulated data amount of the data in the buffer;

an identifying step of generating stored position information representing a position of the start data stored in the buffer and a count number representing a number of the start data stored in the buffer, as information for identifying the start data in the buffer, based on the analysis result from the ~~analyzing analysis~~ step and the control from the control step;

a step of comparing the count number against a predetermined threshold number and, when the number becomes equal to or greater than the threshold number, outputting a predetermined notification signal;

a reading step of reading out data from the buffer with a ~~predetermined timing of~~ receiving the notification signal;

a separating step of separating, based on the ~~information for identifying the start data~~ stored position information and the count number, the start data contained in the data read out into start information and data; and

a decoding step of performing a decode process for the data read out based on the start information.

20. (Canceled)

21. (Currently Amended) An integrated circuit to be incorporated into a device which processes packets in which variable length data is split and stored,

wherein the device comprises a buffer for storing data, and

wherein the integrated circuit integrates circuitry ~~functioning functions~~ as:

a header analyzing section for analyzing a header of an inputted packet, and determining

whether data stored in a payload is start data containing start information or other data;

a data extracting section for referring to an analysis result from the header analyzing section, and extracting the data from the payload in the packet;

a buffer for storing the data extracted by the data extracting section;

a buffer controlling section for controlling a stored position and an accumulated data amount of the data in the buffer;

a start data identifying section for generating stored position information representing a position of the start data stored in the buffer and a count number representing a number of the start data stored in the buffer, as information for identifying the start data in the buffer, based on the analysis result from the header analyzing section and the control by the buffer controlling section; and

a decode section for reading out data from the buffer with a predetermined timing, ~~and for performing a decode process for the data read out based on the information for identifying the start data in the buffer, the information having been generated by the start data identifying section~~ obtaining the stored position information and the count number from the start data identifying section, separating the start data contained in the data read out into start information and data based on the stored position information and the count number, and performing a decode process for the data read out based on the start information;

wherein the buffer controlling section compares the count number against a predetermined threshold number and, when the number becomes equal to or greater than the threshold number, outputs a predetermined notification signal, and

wherein the decode section reads out the data from the buffer with a timing of receiving

the notification signal.

22. (Canceled)